TO THE VOTERS
OF THE
TOWN OF BROOKLINE.

A Proposition for supplying the Town of Brookline with pure well water, for home, mechanical and fire purposes, by which, from 70 to 80 per cent. of the now estimated expense can be saved; and doing away with all litigations and consequential damages arising from others rights, or claims, and rights of way, and giving pure cold water direct from the wells, instead of dirty water, passed through miles of large rusty pipes, from rivers or reservoirs, exposed to all the surface washings, and other impurities too numerous to mention,—and the heat of the sun, which decomposes all animal and vegetable matter, increasing the temperature, so that the water would be unfit for drinking when delivered.

There is undoubtedly a large supply of the best of water under the town land on Cypress street, which can be pumped to the top of Aspinwall hill, which is in the centre of the distributing territory, and about 240 feet above tide water, which will obviate the necessity of using any pipe larger than 6 inch, which is large enough to supply four steam engines at once, in case of fire anywhere within a mile of the reservoir.

A small reservoir is needed only to hold water enough to last a week for ordinary use, or a fire 24 hours, as the water will be distributed direct from the engines, except in case of fire, always giving pure cold water, direct from the wells.

I think the quantity of water that will be used will be far below the amount estimated for a number of years, according to my estimate. I will take 600 families as a basis, who will take *pure* water as soon as the works can be completed,—which can be done before Christmas, 1873. Each family will average 200 gallons per day, (one-half of them wont use 20 gallons daily, or eight pails full,) and the stores, &c. will use about 30,000 gallons; in all, making a total of only 150,000 gallons per day, which is about 100 gallons per minute. This is a large estimate. An ordinary small Artesian well will supply from 20 to 50 gallons per minute, and by connecting a series of these wells to a large sand and air chamber, so as to separate all the sand and gravel from the water before going to the pump; the whole to be supplied with a valve and connection to fit the suction of a steam fire engine, which, when run at full speed, will deliver from 500 to 700 gallons per minute, and, when run moderately, from 100 to 300 per minute. The outlet of the engine to be connected to the main pipe, the main pipe to connect to the delivery, and also to the reservoir, so as to discharge all surplus water into the reservoir.

A good steam fire engine is as good a pumping apparatus as can be obtained, and there is no more wear or expense to run or keep in order than any other pumping apparatus. The engine will always be kept in working order and ready to start to a fire the minute the alarm is given, (being self-propelling,) and be at the fire, with its hose carriage, ready to work as soon as anybody else. The firemen will always be on duty, as they will be employed to do the pumping, one set in the day and one at night. When the engine is away the supply comes from the reservoir, being enough to last twenty four hours at fires. There being two steam engines, one located at the present house, and the other at the well-house, in case of disability of the pumping engine they can be exchanged, so that one engine will be always ready and fired up for use.

If more water is ever needed another well can be put in at the other engine house, and the engine connected in the same manner as the first to the street main at a small expense, so as to run it when required.

ESTIMATE OF COST.

For 40,000 feet of four and six inch pipe,	$ 50,000
For 100 hydrants, at $50,	5,000
For 100 gates,	5,000
Artesian wells, air chambers, and connections,	5,000
1 acre of land, reservoir, and grading,	10,000
Engine house, right of way to hill, &c.,	10,000
Meters, and all other expenses, including service pipes to houses,	15,000
	$100,000

If the water is metered to every one, at the Boston price of three cents per 100 gallons, (which is cheap water if good,) there will be less wasted, and the expense of meters will be offset by the reduced cost of pumping, and the expense of keeping men to examine the works in each house, and complaints of over-charging when not in use, &c. Where there is less than 100 gallons per day used, the rate should be $10 for each family per year. The total receipts would be for 150,000 gallons per day about $20,000, which would pay the interest on the $100,000, and the surplus would be amply sufficient for all needed extension and repairs as required, the whole being of no further expense to the town. The town not being asked to pay anything for the use of the hydrants or water.

After carefully considering the foregoing, will the voters of Brookline appropriate a sum sufficient to test the only question which there is any doubt about, that is, if there is a sufficient supply of water to be found at the place designated, or any other place that your committee may suggest, not to exceed $5,000, and if successful, the amount used will be put to the credit of the $100,000 here appropriated, and the work to be completed as soon as possible.

P. S. By request of the voters of Brookline I respectfully submit the foregoing.

JOHN E. ROBINSON.

Boston, March 17, 1873.